#### Curriculum Vitae

## Joshua D. Auerbach, M.D.

Office Address: Bronx-Lebanon Hospital Center

Albert Einstein College of Medicine Department of Orthopaedic Surgery 1650 Grand Concourse, 7<sup>th</sup> Floor

Bronx, NY 10457 (T)718-518-5814 (F)718-466-8168

<u>Education</u>: B.S. Yale University (Biology), New Haven, CT

M.D. Mount Sinai School of Medicine, New York, NY

Postgraduate Training and Fellowship Appointments:

Intern in General Surgery and Orthopaedic Surgery, Hospital of the University of Pennsylvania, Philadelphia

Resident in Orthopaedic Surgery,

Hospital of the University of Pennsylvania, Philadelphia

Academic Research Fellowship, McKay Orthopaedic Laboratories, University of Pennsylvania, Philadelphia Principal Investigator: Dawn M. Elliott, PhD

Adult and Pediatric Spinal Reconstructive Surgery Fellowship, Washington University School of Medicine/Barnes-Jewish Hospital,

St. Louis, MO

<u>Present Position</u>: Chief of Spine Surgery

Department of Orthopaedics Bronx-Lebanon Hospital Center Albert Einstein College of Medicine

Bronx, NY

Faculty Appointments:

Instructor in Orthopaedic Surgery, Department of Orthopaedic Surgery,

University of Pennsylvania, Philadelphia, PA

Clinical Instructor, Department of Orthopaedic Surgery Washington University School of Medicine, St. Louis, MO

Assistant Professor, Department of Orthopaedic Surgery

Albert Einstein College of Medicine, Bronx, NY

Licensure: New York, Missouri, Pennsylvania

Board Certification: Board of Orthopaedic Surgery

## Awards, Honors and Membership in Honorary Societies:

- 1998 Graduation with Honors in Biology, Yale University
- 2000 Research Scholars Program Summer Fellowship,

(Mount Sinai School of Medicine)

- 2002 Graduation with Distinction in Research, (Mount Sinai School of Medicine)
- 2005 Finalist for Russell Hibbs Award in Basic Science, (Scoliosis Research Society, 2005)

"Towards an evidence-based approach to imaging in evaluation of back pain in children."

- 2005 Hansjoerg Wyss Foundation Oral Presentation Award at the Excellence in Spine Conference, Davos, Switzerland (best oral presentation).
  - "Noninvasive determination of nucleus pulposus proteoglycan content using T1p MRI."
- 2005 20<sup>th</sup> Annual Smith & Nephew Resident Research Competition Award Recipient,

"Spinal Cord Dimensions in Children with Klippel-Feil Syndrome: A Controlled, Blinded Radiographic Analysis with Implications for Neurologic Outcomes."

- 2005 20<sup>th</sup> Annual Smith & Nephew Resident Research Competition Award Recipient,
  - "Evaluation of spinal kinematics following lumbar total disc replacement and circumferential fusion using in vivo fluoroscopy."
- 2005 Orthopaedic Research and Education Foundation (OREF)/Bayer
  Pharmaceuticals Resident Research Award in Blood Management Research,
  "Two-incision MIS THA versus small-incision mini-posterolateral THA: A
  comparison of surgical stress and thrombotic potential."
- 2006 First Prize (Clinical Research Section) University of Pennsylvania Annual Research Symposium,
  - "Detection of impending neurologic injury during surgery for adolescent idiopathic scoliosis: A comparison of transcranial motor and somatosensory evoked potential monitoring in 1121 consecutive cases."
- 2006 First Prize, OREF/NY Metropolitan Area Resident Research Competition "Detection of impending neurologic injury during surgery for adolescent idiopathic scoliosis: A comparison of transcranial motor and somatosensory evoked potential monitoring in 1121 consecutive cases."
- 2006 21<sup>st</sup> Annual Smith & Nephew Resident Research Competition Award Recipient,
  - "Detection of impending neurologic injury during surgery for adolescent idiopathic scoliosis: A comparison of transcranial motor and somatosensory evoked potential monitoring in 1121 consecutive cases."
- 2006 Russell Hibbs Award in Clinical Science Best Clinical Presentation (Scoliosis Research Society, 2006)
  - "Detection of impending neurologic injury during surgery for adolescent idiopathic scoliosis: A comparison of transcranial motor and somatosensory evoked potential monitoring in 1121 consecutive cases."
- 2007 Stanley Chung Award for Excellence in Research,

The Children's Hospital of Philadelphia, Department of Orthopaedic Surgery

2007 Scoliosis Research Society (SRS) Research Grant Award, "An in vivo porcine animal model to detect spinal cord vascular flow in spinal deformity surgery using transcranial motor evoked potential monitoring."

2008 Recipient of the 21<sup>st</sup> Century Development Grant, (Cervical Spine Research Society, 2008)

"In vivo quantification of adjacent level cervical disc integrity following anterior cervical decompression and fusion and laminaplasty: A matched pair analysis and comparison using T1rho-weighted MRI."

2008 Recipient of the Dubousset Scholarship (Scoliosis Research Society)

2009 Finalist for Russell Hibbs Award in Basic Science, (Scoliosis Research Society, 2009)

"Quantification of intradiscal pressures below thoracolumbar spinal fusion constructs: Is there evidence to support saving a level?"

2009 Finalist for Russell Hibbs Award in Clinical Science, (Scoliosis Research Society, 2009)

"Major complications of three-column osteotomies in 240 consecutive spinal deformity patients."

2009 Finalist for Russell Hibbs Award in Clinical Science, (Scoliosis Research Society, 2009) "Pulmonary function in adolescent idionathic scoliosis re

"Pulmonary function in adolescent idiopathic scoliosis relative to the surgical procedure: A 10-year follow-up analysis."

2009 Recipient of the Hansjorg Wyss Foundation Research Grant Award, (AO Spine Foundation)

"Disc Degeneration Below Arthrodesis in Adolescent Idiopathic Scoliosis at a minimum 10 year follow-up."

2010 Best Poster, Spine Arthroplasty Society, 2010
 "The Feasibility of Radiation-free Diagnostic Monitoring in Adolescent Idiopathic Scoliosis Using a Novel, Upright Positional MRI Protocol."

2010 Resident/Fellow Paper Award, (presented by Okechukwu Anakwenze, MD), (Eastern Orthopaedic Association, 2010)
"Fusion can prevent spinal deformity following intramedullary spinal cord

"Fusion can prevent spinal deformity following intramedullary spinal cord tumor excision in children."

## Memberships in Professional and Scientific Societies:

### National Societies:

Scoliosis Research Society
American Academy of Orthopaedic Surgeons
Spine Arthroplasty Society
AO Spine International
North American Spine Society
Orthopaedic Research Society

#### Local Societies:

Bronx County Medical Society Medical Society of the State of New York Yale Club of New York City **Editorial Positions:** 

2003- Special Projects Committee,

University of Pennsylvania Orthopaedic Journal (UPOJ)

2004-5 Article Solicitation Committee,

University of Pennsylvania Orthopaedic Journal (UPOJ)

2005 Co-Guest Editor, Seminars in Spine Surgery

December, 2005, Lumbar Instability (with Richard A. Balderston, MD)

2007 Co-Guest Editor, Seminars in Spine Surgery

June, 2007, Imaging Techniques (with Richard A. Balderston, MD)

Academic Committees at the University of Pennsylvania and Affiliated Hospitals:

2004-8 Member, Resident Selection Program Committee, Department of

Orthopaedic Surgery

Major Teaching and Clinical Responsibilities at the University of Pennsylvania and Affiliated Hospitals:

2004-5 University of Pennsylvania School of Medicine Medical Students (8

students/week, 3 hours/week) Instructor, Orthopaedics 200 module

**Lectures by Invitation**:

September 15, 2000 "Septic arthritis of the glenohumeral joint,"

- Grand Rounds Presentation, Department of Orthopaedic Surgery, Mount Sinai

Hospital, New York, NY

March 15, 2001 "Current concepts in bone grafting,"

- Combined Mount Sinai-NYU Orthopaedic Meeting, Hospital for Joint

Diseases, New York, NY

June 8, 2002 Keynote Speaker, Graduation Day, Woodland Country Day School, Bridgeton,

NJ

February 9, 2005 "Evaluation of spinal kinematics following lumbar total disc replacement and

circumferential fusion using in vivo fluoroscopy,"

- Biomechanical Engineering Seminar, McKay Orthopaedic Laboratories,

University of Pennsylvania, Philadelphia, PA

April 13, 2005 "Evaluation of spinal kinematics following lumbar total disc replacement and

circumferential fusion using in vivo fluoroscopy,"

- Interdisciplinary Spine Journal Club, University of Pennsylvania, Philadelphia,

PA

February 23, 2006 "Towards an evidence-based approach to imaging in evaluation of back pain in

children."

- Grand Rounds Presentation, Department of Orthopaedic Surgery, University of

Pennsylvania, Philadelphia, PA

August 25, 2006 "Multimodal intraoperative spinal cord monitoring in adolescent idiopathic scoliosis:

A multicenter study,"

- Philadelphia Pediatric Spine Symposium, The Children's Hospital of Philadelphia,

Philadelphia, PA

February 1, 2007	"T1rho-weighted MRI for the detection of early degenerative disc disease," - Selby Spine Conference, Park City, Utah
May 2, 2007	"Endplate mechanics," - HydraFlex Nucleus Arthroplasty: Concepts and Clinical Experience, Spine Arthroplasty Society, Berlin, Germany
February 21, 2008	"VATS versus Posterior Spinal Fusion with Thoracic Pedicle Screws in Adolescent Idiopathic Scoliosis," - Grand Rounds Presentation, Department of Orthopaedic Surgery, University of Pennsylvania, Philadelphia, PA
February 21, 2008	"Does the experience level of the surgical assistant influence outcomes in scoliosis surgery?" - Grand Rounds Presentation, Department of Orthopaedic Surgery, University of Pennsylvania, Philadelphia, PA
May 16, 2008	"Potential applications of T1rho-weighted MRI in spinal deformities" -Depuy Spine, World Wide Head Quarters, Raynham, MA
March 21, 2009	"The use of T1rho-weighted MRI for preclinical and clinical trials of disc regeneration" -Omrix Think Tank Meeting, New York, NY
April 8, 2009	"Degenerative Conditions of the Cervical Spine" -Grand Rounds Presentation, Department of Orthopaedic Surgery, Washington University School of Medicine, St. Louis, MO
August 3, 2009	"Adjacent Level Degeneration: Clinical and Biomechanical Evaluation" -Depuy Spine, World Wide Head Quarters, Raynham, MA
September 10, 2009	"Low Back Pain and Degenerative Lumbar Spinal Disorders." -Family Medicine Grand Rounds, Bronx-Lebanon Hospital Center, Bronx, NY
September 17, 2009	"Identification, Evaluation, and Management of Spinal Disease." -Internal Medicine and Neurology Grand Rounds, Bronx-Lebanon Hospital Center, Bronx, NY
September 21, 2009	"Congenital Scoliosis." -Pediatrics Resident Conference, Bronx-Lebanon Hospital Center, Bronx, NY
November 2, 2009	"Early onset scoliosis." -Pediatrics Resident Conference, Bronx-Lebanon Hospital Center, Bronx, NY
November 3, 2009	"Evaluation and Treatment of the Growing Spine." -Pediatrics Grand Rounds, Bronx-Lebanon Hospital Center, Bronx, NY
November 4, 2009	"Degenerative Conditions of the Cervical Spine." -Orthopaedic Surgery Resident Conference, Albert Einstein College of Medicine, Weiler Hospital, Bronx, NY

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Jannuary 11, 2010	"Pediatric Cervical Spinal Disorders." -Pediatrics Resident Conference, Bronx-Lebanon Hospital Center, Bronx, NY
April 27, 2010	"Degenerative Conditions of the Cervical and Lumbar Spine." -Medical Student Lecture (Surgery Rotation, Albert Einstein College of Medicine), Bronx-Lebanon Hospital Center, Bronx, NY
July 22, 2010	"Degenerative Conditions of the Cervical and Lumbar Spine." -Medical Student Lecture (Surgery Rotation, Albert Einstein College of Medicine), Bronx-Lebanon Hospital Center, Bronx, NY
Sept 14, 2010	"Degenerative Conditions of the Cervical and Lumbar Spine." -Medical Student Lecture (Surgery Rotation, Albert Einstein College of Medicine), Bronx-Lebanon Hospital Center, Bronx, NY
Sept 14, 2010	"Identifying, Evaluating, and Treating Low Back Pain." -Lumbar Spine Symposium, TRIARQ The Neil D. Levin Graduate Institute, New York, NY
October 27, 2010	"Identifying, Evaluating, and Treating Cervical Spinal Disease." -Bronx County Medical Society, Bronx, NY
November 9, 2010	"Degenerative Conditions of the Cervical." -Medical Student Lecture (Surgery Rotation, Albert Einstein College of Medicine), Bronx-Lebanon Hospital Center, Bronx, NY

# Organizing Roles in Scientific Meetings:

May, 2008	Moderator, 8 <sup>th</sup> Annual Spine Arthroplasty Society Annual Meeting, Dynamic Posterior Stabilization, Miami, FL
May, 2008	Co-Course Director, The University of Pennsylvania Department of Orthopaedic Surgery Spine Cadaver Course, Synthes Spine, West Chester, PA

# Bibliography:

### Research Publications, peer reviewed:

- 1. Birnbaum S, Gobeske KT, **Auerbach J**, Taylor JR, Arnsten AFT. A role for norepinephrine in stress-induced cognitive deficits: α-1 adrenoceptor mediation in the prefrontal cortex. *Biol Psych* 1999; 46:1266-74.
- 2. Miller S, Cleeman E, **Auerbach JD**, Flatow EL. Comparison of intra-articular lidocaine and intravenous sedation for reduction of shoulder dislocations: A randomized, prospective study. *J Bone Joint Surg Am* 2002; 84-A:2135-2139
- 3. Cleeman E, Hazrati Y, **Auerbach JD**, Shubin Stein K, Hausman M, and Flatow EL. Latissimus dorsi tendon transfer for massive rotator cuff tears: A cadaveric study. *J Shoulder Elbow Surg* 2003; 12(6):539-543.
- 4. **Auerbach JD**, Radomisli TE, Simoncini J, Ulin RI. Variability of the metaphyseal-diaphyseal angle in tibia vara: A comparison of two methods. *J Pediatr Orthop* 2004; 24 (1):75-78.

- 5. Klepps S, **Auerbach J**, Cahlon O, Lin J, Cleeman E, and Flatow EL. A cadaveric study on the anatomy of the deltoid insertion and its relationship to the deltopectoral approach to the proximal humerus. *J Shoulder Elbow Surg* 2004;13(3):322-327.
- 6. Cleeman E, **Auerbach JD**, Springfield DS. Tumors of the shoulder girdle: A review of 194 cases. *J Shoulder Elbow Surg* 2005;14(5):460-5.
- 7. Cleeman E, **Auerbach JD**, Klingenstein GG, Flatow EL. Septic arthritis of the glenohumeral joint: A review of 23 cases. *J Surg Orthop Adv* 2005; 14(2);102-7.
- 8. **Auerbach JD**, Parks ML, Levy RN. The effect of volume and pressure on femoral cement grade. *Orthopedics* 2005;28:1413-1415.
- 9. Chin KR, **Auerbach JD**, Adams SB, Sodl J, and Riew KD. Mastication as a cause of segmental spinal motion in common cervical orthoses. *Spine* 2006;31(4):430-4.
- 10. **Auerbach JD**, Johannessen W, Borthakur A, Wheaton AJ, Dolinskas CA, Balderston RA, Reddy R, Elliott DM. In vivo quantification of human lumbar disc degeneration using T(1rho)-weighted magnetic resonance imaging. *Eur Spine J* 2006;15 (Suppl 15): 338-44.
- 11. Johannessen W, **Auerbach JD**, Wheaton AJ, Kurji A, Reddy R, Borthakur A, Elliott DM. Assessment of human disc degeneration and proteoglycan content using T1ρ MRI. *Spine* 2006;31(11):1253-1257.
- 12. Wills BPD, **Auerbach JD**, Glotzbecker MP, Drummond DS, Dormans JP. Change in lordosis at the occipitocervical junction following occipitocervical fusion in skeletally immature children. *Spine* 2006;31(20):2304-9.
- 13. Mehta S, **Auerbach JD**, Chin KR, and Born CT. Sacral fractures. *J Am Acad Orthop Surg*. 2006 Nov;14(12):656-65.
- 14. Pandya NK, **Auerbach JD**, Baldwin K, Lackman RD, Chin KR. Spinal Cord Compression in a Patient with Multiple Hereditary Exostosis Caused by Breast Adenocarcinoma Metastatic to Osteochondromas of the Spine. *Spine* 2006;31(24): E920-4.
- 15. Wills BPD, **Auerbach JD**, Zhu Z, Caird MS, Horn BD, Flynn JM, Drummond DS, Dormans JP, Ecker ML. Comparison of Cobb angle measurement of scoliosis radiographs: Traditional versus digital acquisition. *Spine* 2007;32(1): 98-105.
- 16. **Auerbach JD**, McCormick FL, Mehta S, Brummett RS, Rushton SA. Posterior cervical arthrodesis for odontoid nonunion in a patient with osteopetrosis. *Spine* 2007;32(1):E34-8.
- 17. **Auerbach JD**, Wills BP, McIntosh TC, and Balderston RA. Evaluation of spinal kinematics following lumbar total disc replacement and circumferential fusion using *in vivo* fluoroscopy. *Spine* 2007; 32(5):527-536.
- 18. Schwartz DM, **Auerbach JD**, Dormans JP, Flynn J, Bowe JA, Laufer S, Shah SA, Bowen JR, Pizzutillo PD, Jones KJ, Drummond DS. Neurophysiological Detection of Impending Spinal Cord Injury During Scoliosis Surgery. *J Bone Joint Surg Am.* 2007;89:2440-2449.
- 19. Wang C, **Auerbach JD**, Witschey WRT, Balderston RA, Reddy R, Borthakur A. Advances in Magnetic Resonance Imaging for the assessment of degenerative disc disease of the lumbar spine. *Seminars in Spine Surgery* 2007; 19(2):65-71.
- 20. Boxberger JI, **Auerbach JD**, Sen S, Elliott DM. An in vivo model of reduced nucleus pulposus glycosaminoglycan content in the rat lumbar intervertebral disc. *Spine* 2008; 33(2):146-54.
- 21. **Auerbach JD**, Jones KJ, Fras CI, Balderston JR, Rushton SA, Chin KR. The Prevalence of Indications and Contraindications to Cervical Total Disc Replacement. *Spine J* 2008; 8: 711–716.
- 22. Simon SL, **Auerbach JD**, Garg S, Sutton LN, Telfeian AE, Dormans JP. Efficacy of spinal instrumentation and fusion in the prevention of post-laminectomy spinal deformity in children with intramedullary spinal cord tumors. *J Pediatr Orthop* 2008; 28(2):244-249.
- 23. Fras CI, **Auerbach JD**. Prevalence of lumbar total disc replacement candidates in a community-based spinal surgery practice. *J Spinal Disord Tech* 2008; 21(2):126-129.

- 24. Chin KR, Tomlinson DT, **Auerbach JD**, Shatsky J, Deirmengian CA. Success of Lumbar Microdiscectomy In Patients With Modic Changes and Low-Back Pain: A Prospective Pilot Study. *J Spinal Disord Tech* 2008; 21(2):139-144.
- 25. **Auerbach JD**, Lonner BS, Antonacci MD, Kean KE. Perioperative outcomes and complications related to teaching residents and fellows in scoliosis surgery. *Spine* 2008; 33(10):1113-8.
- Auerbach JD, Hosalkar HS, Kusuma SK, Wills BPD, Dormans JP, Drummond DS. Spinal Cord Dimensions in Children with Klippel-Feil Syndrome: A Controlled, Blinded Radiographic Analysis with Implications for Neurologic Outcomes. *Spine* 2008; 33(12):1366-71.
- 27. **Auerbach JD**, Ahn J, Zgonis MH, Reddy SC, Ecker ML, Flynn JM. Streamlining the evaluation of low back pain in children. *Clin Orthop Relat Res.* 2008; 466(8):1971-7.
- 28. Rundell SA, **Auerbach JD**, Balderston RA, Kurtz SM. Total Disc Replacement Positioning Affects Facet Contact Forces and Vertebral Body Strains. *Spine* 2008;33(23):2510-7.
- 29. **Auerbach JD**, Namdari S, Milby AH, White AP, Reddy SC, Lonner BS, Balderston RA. The parallax effect in the evaluation of range of motion in lumbar total disc replacement. *Spine Arthroplasty Society Journal* 2008; 2(4):184-188.
- 30. Lonner BS, **Auerbach JD**, Levin R, Matusz D, Scharf C, Panagopoulos G, Sharan AD. Thoracoscopic Anterior Instrumented Fusion for Adolescent Idiopathic Scoliosis with Emphasis on the Sagittal Plane. *Spine J* 2009; 9(7): 523-52.
- 31. Lonner BS, **Auerbach JD**, Estreicher M, Milby AH, Panagopoulos G, Chang D. Video-assisted Anterior Thoracoscopic Spinal Fusion versus Posterior Spinal Fusion: A Comparative Study Utilizing the SRS-22 Outcome Instrument. *Spine* 2009; 34(2):193-198.
- 32. Lonner BS, **Auerbach JD**, Estreicher MB, Milby AH, Kean KE. Video-assisted thoracoscopic spinal fusion compared to posterior spinal fusion with thoracic pedicle screws for Lenke Type I adolescent idiopathic scoliosis. *J Bone Joint Surg Am* 2009; 91(2):398-408.
- 33. Lonner BS, **Auerbach JD**, Boachie-Adjei O, Shah SA, Hosgane N, Newton PO. Treatment of thoracic scoliosis: Are monoaxial thoracic pedicle screws the best form of fixation for correction? *Spine* 2009; 34(8):845-51.
- 34. **Auerbach JD**, Weidner Z, Pill SG, Mehta S, Chin KR. The mandibular angle as a landmark for identification of cervical spinal level. *Spine* 2009; 34(10):1006-11.
- 35. Moore RE, Dormans JP, Drummond DS, Kaplan FS, **Auerbach JD**. Chin-on-chest deformity in the malformed cervical spine of patients with fibrodysplasia ossificans progressive. *J Bone Joint Surg* 2009 Jun;91(6):1497-502.
- 36. Mik G, Drummond DS, Hosalkar HS, Cameron D, Agrawal N, Manteghi A, Gholve P, **Auerbach JD**. Diminished Spinal Cord Size with Congenital Scoliosis of the Thoracic Spine: A risk for neurological sequelae? *J Bone Joint Surg* 2009 Jul;91(7):1698-704.
- 37. Anakwenze OA, **Auerbach JD**, Milby AH, Lonner BS, Balderston RA. Sagittal cervical alignment following cervical disc arthroplasty and anterior cervical diskectomy and fusion: Results of a prospective randomized controlled trial. *Spine* 2009; 34(19):2001-7.
- 38. Rundell SA, Guerin HL, **Auerbach JD**, Kurtz SM. Effect of nucleus replacement device properties on lumbar spine mechanics. *Spine* 2009; 34(19):2022-32.
- 39. Lonner BS, **Auerbach JD**, Estreicher ME, Kean KE. Thoracic pedicle screw instrumentation: The learning curve and evolution in technique in adolescent idiopathic scoliosis. *Spine* (Phila Pa 1976) 2009 Sep 15;34(20):2158-64.
- 40. **Auerbach JD**, Spiegel DA, Zgonis MH, Reddy SC, Drummond DS, Dormans JP, Flynn JM. The correction of pelvic obliquity in patients with cerebral palsy and neuromuscular scoliosis: Is there a benefit of anterior release prior to posterior spinal arthrodesis? *Spine* 2009; 34(21):E766-E774
- 41. **Auerbach JD**, Jones KJ, Milby AH, Anakwenze OA, Balderston RA. Segmental contribution towards total lumbar range of motion in disc replacement and fusions: A comparison of operative and adjacent levels. *Spine* 2009 Nov 1;34(23):2510-7.

- 42. Lonner BS, **Auerbach JD**, Estreicher MB, Betz RR, D'Andrea L, Crawford AH, Lenke LG, Lowe TG, Newton PO. Pulmonary function changes following various anterior approaches in the treatment of adolescent idiopathic scoliosis. *J Spinal Disord Tech* 2009; 22(8):551-8.
- 43. Lonner BS, **Auerbach JD**, Sponseller P, Rajadhyaksha AS, Newton PO. Variations in Pelvic and Other Sagittal Spinal Parameters as a Function of Race in Adolescent Idiopathic Scoliosis. *Spine* (Phila Pa 1976). 2010 Feb 4. [Epub ahead of print]
- 44. Anakwenze OA, Namdari S, **Auerbach JD**, Weidner Z, Baldwin K, Lonner BS, Sennett BJ. Athletic performance outcomes following lumbar diskectomy in professional basketball players. *Spine* (Phila Pa 1976). 2010 Apr 1;35(7):825-8.
- 45. Chin KR Stieber JR, Mehta S, Cohen JD, **Auerbach JD**. The manubrium as an external guide for centralizing anterior cervical plates: Technique tips and initial experience. *Spine* (Phila Pa 1976). 2010 Apr 1;35(7):E244-7.
- 46. **Auerbach JD**, Ballester CM, Hammond F, Carine ET, Balderston RA, Elliott DM. The effect of implant size and device keel on vertebral compression properties in lumbar total disc replacement. *Spine J* 2010 Apr;10(4):333-40.
- 47. Yoder HJ, **Auerbach JD**, Maurer PM, Erbe EM, Entrekin D, Balderston RA, Bertagnoli R, Elliott DM. Augmentation Improves Human Cadaveric Vertebral Body Compression Mechanics For Lumbar Total Disc Replacement. *Spine* (Phila Pa 1976). 2010 Apr 20;35(9):E325-31.
- 48. Kamerlink JR, Quirno M, **Auerbach JD**, Milby AH, Windsor L, Dean L, Dryer JW, Errico TJ, Lonner BS. Hospital Cost Analysis of Adolescent Idiopathic Scoliosis Correction Surgery in 125 Consecutive Cases. *J Bone Joint Surg* Am 2010; 92(5):1097-104.
- 49. Crawford CH 3rd, Bridwell KH, Cho W, Buchowski JM, O'Shaughnessy BA, Chang MS, Auerbach JD. Extension of Prior Idiopathic Scoliosis Fusions to the Sacrum: A Matched Cohort Analysis of Sixty Patients With Minimum Two-Year Follow-up. Spine 2010; 35(20):1843-8.
- 50. Verma K, **Auerbach JD**, Kean KE, Chamas F, Vorsanger M, Lonner BS. Anterior spinal fusion for thoracolumbar scoliosis: comprehensive assessment of radiographic, clinical, and pulmonary outcomes on 2-years follow-up. *J Pediatr Orthop* 2010; 30:664-9.

#### Abstracts:

Cleeman E, Hazrati Y, **Auerbach JD**, Shubin Stein K, Strauss E, Flatow EL. Humeral head replacement in the treatment of proximal humerus fractures. *American Fracture Association*, 63<sup>rd</sup> *Annual Meeting*, Savannah, GA, May 3-6, 2001.

**Auerbach JD**, Hazrati Y, Cleeman E, Shubin Stein K, Strauss E, Flatow EL. The surgical treatment of acromioclavicular dislocations: A retrospective review. *American Fracture Association*, 63<sup>rd</sup> Annual Meeting, Savannah, GA, May 3-6, 2001.

**Auerbach JD**, Radomisli TE, Shah AK, Simoncini J, Ulin RI. Variability of the metaphyseal-diaphyseal angle in tibia vara: A comparison of two methods. *The Pediatric Orthopaedic Club of New York*, The New York Academy of Medicine, New York, NY, May 9, 2001.

**Auerbach JD**, Radomisli TE, Simoncini J, Ulin RI. Variability of the metaphyseal-diaphyseal angle in tibia vara: A comparison of two methods. *Pediatric Research Day*, Mount Sinai Hospital, New York, NY, May 16, 2001.

Cleeman E, Hazrati Y, **Auerbach JD**, Shubin Stein K, Flatow EL. Latissimus dorsi tendon transfer for massive rotator cuff tears. *Ortopedia 2001*, Havana, Cuba, November 27-December 2, 2001.

- Cleeman E, Hazrati Y, **Auerbach JD**, Shubin Stein K, and Flatow EL. Latissimus dorsi tendon transfer for massive rotator cuff tears: A cadaveric study. *J South Orthop Assoc* 2002; 11(1):63 (abstract).
- Cleeman E, **Auerbach JD**, Flatow EL. Septic arthritis of the glenohumeral joint: A review of 35 cases. *J South Orthop Assoc* 2002; 11(1):62 (abstract).
- Miller S, Cleeman E, **Auerbach JD**, Gladstone JN, Flatow EL. A randomized prospective study comparing the use of intra-articular lidocaine versus parenteral sedation and analgesics when reducing the dislocated shoulder. *The Third Bienniel American Academy of Orthopaedic Surgeons/Association of Shoulder and Elbow Surgeons Meeting*, Orlando, FL, April 4-7, 2002.
- Cleeman E, **Auerbach JD**, Springfield DS. Tumors of the shoulder girdle: A review of 194 cases. *The Third Bienniel American Academy of Orthopaedic Surgeons/Association of Shoulder and Elbow Surgeons Meeting*, Orlando, FL, April 4-7, 2002.
- Miller S, Cleeman E, **Auerbach JD**, and Flatow EL. Comparison of intra-articular lidocaine and intravenous sedation for reduction of shoulder dislocations: A randomized, prospective study. 28<sup>th</sup> Annual American Orthopaedic Society for Sports Medicine Meeting (AOSSM), Orlando, FL, July 2002.
- Daffner S, **Auerbach J**, Hilibrand A, Vaccaro A, Albert T. Maintenance of reduction in patients undergoing transforaminal lumbar interbody fusion for isthmic spondylolisthesis. *Spine J* 2002; 2(5 Suppl):59-60 (abstract).
- **Auerbach JD**, Klingenstein G, Cleeman E, Springfield DS. Long-term follow up after surgical treatment for enchondroma of the proximal humerus. *The 71<sup>st</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons*, San Francisco, CA, March 10-14, 2004.
- **Auerbach JD**, McIntosh TC, Wills B, Balderston RA. In vivo fluoroscopy to evaluate spinal kinematics after lumbar total disc arthroplasty, spinal fusion and in normal healthy volunteers. *The 4<sup>th</sup> Annual Spine Arthroplasty Society (SAS) Meeting*, Vienna, Austria, May 4-7, 2004.
- Elliott DM, Yerramalli C, Johannessen W, Auerbach J, Chin K, Vresilovic E, The role of nucleus pulposus mechanics in degeneration, Increased crosslinking and stiffness may be more important than decreased proteoglycan and pressure. *Proceedings of the International Society for the Study of Lumbar Spine, Porto, Portugal*, p. 104, 2004
- Pedowitz DI, **Auerbach JD**, Gibson B, Vresilovic EJ, Guerin HL, Johannessen W, Rogers D, and Elliott DM. Correlation of MRI and gross morphologic grading of lumbar intervertebral discs. *Trans Orthop Res Soc*, 2005: p.378 (abstract).
- **Auerbach JD**, Zgonis MH, Reddy SC, Ahn J, Ecker ML, Flynn JM. Towards an evidence-based approach for imaging in evaluation of back pain in children. *Pediatric Orthopaedic Society of North American (POSNA) Annual Meeting*, Ottawa, Ontario, Canada, May 13, 2005 May 15, 2005.
- **Auerbach JD**, McIntosh TC, Wills B, Balderston RA. Lumbar disc arthroplasty versus fusion: Two-year results from a randomized prospective study. *The 5<sup>th</sup> Annual Spine Arthroplasty Society (SAS) Meeting*, New York, NY, May 4-7, 2005.

- Fras CI, **Auerbach JD.** Prevalence of lumbar total disc replacement candidates in a community-based spinal surgery practice. *Proceedings of the International Society for the Study of Lumbar Spine*, New York, p. 29, 2005.
- **Auerbach JD**, Zgonis MH, Reddy SC, Ahn J, Ecker ML, Flynn JM. Towards an evidence-based approach for imaging in evaluation of back pain in children. *Proceedings of the International Society for the Study of Lumbar Spine*, New York, p. 46, 2005.
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